

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) ~~A manufacturing method of~~ method of manufacturing a fuel cell, which ~~comprises~~ cell having a hydrogen-permeable metal layer ~~of a hydrogen-permeable metal~~ and an electrolyte layer ~~that is located~~ disposed on the hydrogen-permeable metal layer, ~~and has proton conductivity~~, said ~~the~~ manufacturing method comprising:

forming ~~a thin~~ an electrolyte layer on the hydrogen-permeable metal layer, wherein the electrolyte layer has pores; and

forming a conductive layer on the ~~formed~~ thin electrolyte layer ~~electronically discontinued with~~ such that a portion of the conductive layer formed on the electrolyte layer is discrete from a portion of the conductive layer formed inside the pores of the electrolyte layer. the hydrogen-permeable metal layer via the pores, wherein the conductive layer has electrical conductivity.

2. (Currently Amended) ~~A manufacturing~~ The method in accordance with ~~of~~ claim 1, wherein the conductive layer is an electrode.

3. (Previously Presented) ~~A manufacturing~~ The method in accordance with ~~of~~ claim 1, wherein said ~~the~~ forming a conductive layer is implemented by releasing a conductive material toward ~~the thin~~ the electrolyte layer in a direction perpendicular to ~~the thin~~ the electrolyte layer, ~~so as to form~~ layer such that the conductive layer ~~that is~~ is formed thinner than ~~the thin~~ the electrolyte layer.

4. (Currently Amended) ~~A manufacturing~~ The method in accordance with ~~of~~ claim 1, wherein said ~~the~~ forming a conductive layer is implemented by releasing a conductive material toward ~~the thin~~ the electrolyte layer at ~~a specific~~ an angle that prevents the conductive material from being deposited ~~on surface~~ on a surface of the hydrogen-

permeable metal layer, which is exposed ~~on the~~ ~~by the~~ pores ~~present in the thin~~ ~~of the~~ electrolyte layer, so as to ~~form the conductive layer~~ ~~layer~~.

5. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with ~~of~~ claim 3, wherein ~~said~~ ~~the~~ forming a conductive layer is implemented by ~~adopting~~ ~~using~~ a vacuum deposition technique to ~~form the conductive layer~~ ~~technique~~.

6. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with ~~of~~ claim 1, wherein ~~said~~ ~~the~~ forming the conductive layer further comprises:

forming a dielectric layer in the pores ~~present in~~ ~~of the thin~~ ~~the~~ electrolyte layer, wherein the dielectric layer is ~~mainly made~~ ~~made primarily~~ of an insulating material and blocks off a connection between ~~surface~~ ~~the surface~~ of the hydrogen-permeable metal layer, ~~which is exposed on the pores present in the thin electrolyte layer~~, and ~~an area outside~~ of the pores; and

coating ~~the thin~~ ~~the~~ electrolyte layer and the dielectric layer ~~formed in the~~ pores of the thin electrolyte layer with the conductive layer.

7. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with ~~of~~ claim 6, wherein ~~said forming a~~ ~~the forming the~~ dielectric layer is implemented by filling the pores of ~~the thin~~ ~~the~~ electrolyte layer with dielectric fine particles to form the dielectric layer.

8. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with ~~of~~ claim 6, wherein ~~said forming a~~ ~~the forming the~~ dielectric layer is implemented by ~~coating~~ ~~coating an inside of the pores of~~ ~~the thin~~ ~~the~~ electrolyte layer with an insulating material by ~~plating~~ ~~to form the dielectric layer~~ ~~plating~~.

9. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with ~~of~~ claim 6, wherein ~~said forming a~~ ~~the forming the~~ dielectric layer further comprises:

~~coating~~ ~~coating the inside of the pores of~~ ~~the thin~~ ~~the~~ electrolyte layer with a metal, which is oxidized to an insulating material, to form a metal coat layer; and

oxidizing the metal coat layer to form the dielectric layer.

10. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with of claim 1, wherein ~~said forming a~~ ~~the forming the~~ conductive layer ~~further~~ comprises:

filling the pores ~~present in~~ ~~of the~~ ~~thin~~ ~~the~~ electrolyte layer with fine particles;

forming the conductive layer on ~~the~~ ~~thin~~ ~~the~~ electrolyte layer having the pores filled with the fine particles; and

removing the fine particles from the pores, subsequent to ~~said forming the~~ ~~forming~~ the conductive layer on ~~the~~ ~~thin~~ ~~the~~ electrolyte layer.

11. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with of claim 10, wherein ~~said removing~~ ~~the removing~~ the fine particles is implemented by adopting using a chemical technique to remove the fine particles.

12. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with of claim 10, wherein ~~said removing~~ ~~the removing~~ the fine particles is implemented by adopting a physical technique to remove the fine particles.

13. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with of claim 1, wherein ~~said forming a~~ ~~the forming the~~ conductive layer ~~further~~ comprises:

forming a protective layer to cover ~~the~~ ~~thin~~ ~~the~~ electrolyte layer; and

forming the conductive layer on the protective layer.

14. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with of claim 13, wherein ~~said forming a~~ ~~the forming the~~ conductive layer further comprises:

removing the protective layer and fixing the conductive layer to ~~the~~ ~~thin~~ ~~the~~ electrolyte layer.

15. (Currently Amended) ~~A manufacturing~~ ~~The~~ method in accordance with of claim 13, wherein the protective layer is ~~mainly made~~ ~~made~~ primarily of an insulating material having proton conductivity.

16. (Currently Amended) ~~A manufacturing~~ The method in accordance with ~~of~~ claim 1, wherein ~~said forming a~~ the forming ~~the~~ conductive layer is implemented by coating ~~the thin~~the electrolyte layer with particles of an electrically conductive material having a greater particle diameter greater than a width of the pores ~~present in~~ of ~~the thin~~the electrolyte layer, so as to form ~~the conductive layer~~layer.

17. (Currently Amended) ~~A manufacturing~~ The method in accordance with ~~of~~ claim 16, wherein ~~said forming a~~ the forming ~~the~~ conductive layer is implemented by adopting using one of arc ion plating, emulsion deposition, and cluster beam deposition techniques to coat ~~the thin~~the electrolyte layer with the electrically conductive material techniques.

18. (Currently Amended) ~~A manufacturing~~ The method in accordance with ~~of~~ claim 1, wherein ~~said forming a~~ the forming ~~the~~ conductive layer is implemented by applying a paste, which contains an electrically conductive material and has a predetermined level of viscosity for effectively preventing invasion of the paste into the pores present in ~~the thin~~the electrolyte layer, onto ~~the thin~~the electrolyte layer, so as to form ~~the conductive layer~~layer.

19. (Currently Amended) ~~A manufacturing~~ The method in accordance with ~~of~~ claim 1, wherein ~~said forming a~~ the forming ~~the~~ conductive layer further comprises:

forming a conductive film of an electrically conductive material; and film; and transferring the conductive film onto ~~the thin~~the electrolyte layer, so as to form ~~the conductive layer~~layer.

20. (Currently Amended) A fuel cell comprising a hydrogen-permeable metal layer ~~of a hydrogen permeable metal and an~~ thin and an electrolyte layer that is located disposed on the hydrogen-permeable metal layer and has proton conductivity, layer, ~~said the~~ fuel cell being manufactured by a by the manufacturing method in accordance with ~~of~~ claim 1.

21. (Currently Amended) ~~A manufacturing The method in accordance with of~~
claim 1, wherein the pores are through-holes.